

X to Y and Y to X

Bently Nevada's new convention

Sometimes, new technology obsoletes not only old technology, but also the terminology associated with it. For example, as digital clocks and watches replace analog ones, the terms "clockwise" and "counterclockwise" may lose their meaning. That would make those terms unsuitable to describe shaft rotation and the direction of vibration precession.

The direction of shaft rotation and the direction of vibration precession, using the old convention of clockwise and counterclockwise, depend on the viewpoint of the observer. That is, a shaft rotating clockwise when observed from one end of the machine rotates counterclockwise when observed from the other end. These ambiguities can be eliminated with a change in terminology.

Shaft rotation and the direction of vibration can be described as rotating or vibrating from the Y transducer to the X transducer, or Y to X. This convention depends on using the well-established transducer mounting convention (the Cartesian coordinate system) as the reference.

When mounting transducers, the physical viewpoint of the machine should always be selected as looking from the driver to the driven end. Once the transducers are mounted correctly, the rotation of the shaft, as well as the direction of vibration precession, can be described as X to Y or Y to X, regardless of the viewpoint direction.

This is Bently Nevada Corporation's new standard for plot formats. In this issue of the Orbit, notice that transducer plot markers are labeled X and Y. Shaft rotation direction is now noted as "Y to X" (cw) or "X to Y" (ccw). ■

